

THE EMBODIMENTS OF THE INVENTION IN WHICH AN EXCLUSIVE PROPERTY OR PRIVILEGE IS CLAIMED ARE DEFINED AS FOLLOWS:

1. A process for melting materials to be treated, the process comprising:
  - placing the materials to be treated into a container;
  - heating the materials to be treated in the container until the materials to be treated melt to create melted materials; and
  - allowing the melted materials to cool in the container to create a solidified material.
2. The process of claim 1 further comprising the step of disposing of the container with the material therein.
3. The process of claim 2 wherein the container includes a lid or cover when disposed.
4. The process of claim 1 wherein the container includes a hood.
5. The process of claim 4 wherein the hood has a structure to collect gases.
6. The process of claim 4 that further comprises the steps of:
  - removing the hood after the melted material has been allowed to cool;
  - placing a lid or cover onto the container; and
  - disposing of the container that includes the solidified material therein.
7. The process of claim 1 wherein the material to be treated is heated by at least two electrodes located in the material to be treated and passing a current between the at least two electrodes.
8. The process of claim 7 wherein a starter path of material is placed between the at least two electrodes prior to the heating the material to be treated.
9. The process of claim 7 wherein the container further includes a lid or cover and the electrodes extend through the hood and into the material to be treated.
10. The process of claim 9 wherein the container further includes a lid or cover and the at least one heating element extends through the lid or cover and into the material to be treated.

11. The process of claim 1, wherein the material to be treated is heated by at least one heating element placed in the material to be treated and passing heat through the material to be treated.
12. The process of claim 11 wherein the container further includes a lid or cover and the electrodes extend through the hood and into the material to be treated.
13. The process of claim 11 wherein the container further includes a lid or cover and the at least one heating element extends through the lid or cover and into the material to be treated.
14. The process of claim 1 that further includes the step of removing the solidified material from the container.
15. The process of claim 1 wherein the container includes an insulating layer.
16. The process of claim 15 wherein the insulating layer comprises thermal insulation board.
17. The process of claim 15 wherein the container further includes a refractory material.
18. The process of claim 1 wherein the container further includes a refractory material.
19. The process of claim 1 wherein an additive is added to the material to be treated.
20. The process of claim 19 wherein the additive increases the conductivity of the material to be treated.
21. The process of claim 19 wherein the additive aids in oxidizing metals contained in the material to be treated.
22. The process of claim 19 wherein the additive aids in destroying hazardous materials in the material to be treated.
23. The process of claim 19 wherein the additive aids in destroying certain contaminated types such as chlorinated organic materials.
24. The process of claim 19 wherein the additive aids in improving the durability of the solidified material.

25. The process of claim 19 wherein the additive aids in raising and lowering the melt temperature.
26. The process of claim 1 wherein the container has a cavity and includes a layer of sand in the cavity.
27. The process of claim 1 wherein the container has a cavity and includes a slip form positioned in the cavity.
28. The process of claim 27 wherein the container has a container wall and an opening is defined between the container wall and the slip form.
29. The process of claim 28 further including the step of placing sand in the opening.
30. The process of claim 29 further including the step of removing the slip form from the container and leaving the sand.
31. The process of claim 29 wherein the slip form is not removed from the container.
32. The process of claim 27 wherein the container has a plurality of walls and an opening is defined between the plurality of walls and the slip form.
33. The process of claim 32 that further includes the step of placing sand in the opening.
34. The process of claim 27 wherein the container has a plurality of walls and a bottom and a first opening is defined between the plurality of walls and the slip form and a second opening is formed between the bottom and the slip form.
35. The process of claim 34 that further includes the step of placing sand in both the first opening and the second opening.
36. The process of claim 1 that further includes the step of placing a liquid impermeable liner in the container, wherein the material to be treated is placed in the liner.
37. The process of claim 1 wherein the material to be treated is contained in one or more drums that are placed in the container.

38. The process of claim 37 wherein there is a plurality of drums and there are voids between the drums.
39. The process of claim 38 wherein soil is placed in the voids.
40. The process of claim 1 wherein the material to be treated is contained in one or more boxes that are placed in the container.
41. The process of claim 40 wherein there is a plurality of boxes and there are voids between the boxes.
42. The process of claim 41 wherein soil is placed in the voids.
43. The process of claim 1 that further includes the step of covering the material to be treated with soil prior to heating.
44. The process of claim 1 wherein the material to be treated is mixed with soil.
45. The process of claim 1 wherein the material to be treated is soil material.
46. The process of claim 1 wherein the material to be treated includes soil material.
47. The process of claim 1 wherein the material to be treated includes radioactive material.
48. The process of claim 1 wherein the material to be treated includes hazardous, non-radioactive material.
49. The process of claim 1 wherein the material to be treated includes one or more of the group consisting of hazardous elemental materials, organic compounds, and inorganic compounds.
50. The process of claim 1 that further includes the step of capturing gases generated by heating the material to be treated.
51. The process of claim 50 wherein the captured gases are treated.
52. The process of claim 1 wherein additional material to be treated are placed in the container.

53. The process of claim 52, wherein the additional material to be treated is added to the container using an active feeding method.
54. The process of claim 52, wherein the additional material to be treated is added to the container using a passive feeding method.
55. A container for use in melting material to be treated wherein the container defines a cavity and is configured to receive the material to be treated in the cavity and to have the material to be treated heated in the cavity, the container including a slip form in the cavity.
56. The container of claim 55 that further includes a wall and an opening defined between the wall and the slip form.
57. The container of claim 55 that further includes a plurality of walls and an opening defined between the plurality of walls and the slip form.
58. The container of claim 55 that further includes a plurality of walls and a bottom and a first opening is defined between the plurality of walls and the slip form and a second opening is defined between the bottom and the slip form.
59. The container of claim 56 that further includes sand in the opening.
60. The container of claim 57 that further includes sand in the opening.
61. The container of claim 58 that further includes sand in the first opening and sand in the second opening.
62. The container of claim 55 that further includes an insulating layer.
63. The container of claim 62 wherein the insulating layer comprises thermal insulation board.
64. The container of claim 62 that further includes refractory material.
65. The container of claim 55 that further includes a hood.
66. The container of claim 65 wherein the hood has a structure to collect gases.

67. The container of claim 55 that further includes a liquid impermeable liner configured for receiving the material to be treated.
68. The container of claim 55 that is comprised of steel.